Activity Hazard Analysis Form

ACTIVITY: Soil Removal/Soil Sampling CERTIFIED BY/DATE: Beth Darnell, CIH / August 8, 2002 REVIEWED BY/DATE: _____

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Identify the principal steps involved, including the equipment and machinery to be used, and the sequence of work activities	Analyze each principal step for its potential chemical/ toxicological, radiological, biological and physical hazards	Develop specific controls for each potential hazard. Also: • List inspection requirements for the equipment / machinery listed • Specify worker training requirements
1. Drive to SSFL - FSDF Area. 2. Park at FSDF. 2. Walking/hiking . 3. Visual observations (Mapping, Visual inspection of soils). 4. Soil Sampling of area excavated.	Chemical/Toxicological Hazards: Lead Radiological Hazards: Certain areas at the SSFL are former Department of Energy sites where ionizing radiation sources may have been deposited. This area has been cleared of radiation or radiation activities. Biological Hazards: • Poisonous snakes • Spiders • Bees Physical Hazards: • Slip / Trip / Fall on same level • Sun burn • Vehicle accident, including rolling and striking a fixed object when on an incline. • Foreign object to eye from dust	Chemical/Toxicological Hazards: Boeing personnel or direct contractors are required to evaluate the lead in construction standard to determine the level of personal protective equipment, medical monitoring and personal air monitoring required for the soil removal activities. MWH personnel have conducted soil sampling projects at other shooting ranges where personal lead monitoring was done. The concentration of personal lead exposures were well below the Cal-OSHA PEL of 0.5 mg/m3, however, this monitoring was not done within the previous 12 months. For this reason, MWH will be required to stay out of the exclusion zone during soil removal work and may only approach the site once the soil has been taken out. Sampling activities must be done with the minimum amount of soil disturbance and any dry surface soil shall be sprayed with water to moisten it and prevent airborne dust. With these work practices in place, the follow will also be required: a) Air monitoring during excavation activities and sampling activities with a direct reading dust monitor at the support zone and when sampling. Total dust concentrations of 1 mg/m3 of dust will require MWH personnel to back off further, implement additional soil moistening activities or don respiratory protective equipment. b) Personal Protective Equipment (PPE) in the form of Level D. If the respiratory protection is required it will be a half-face air purifying respirator with HEPA (P100) cartridges. c) Wash hands prior to eating and at end of day. Radiological Hazards: This area had been cleared by Boeing previously as not containing

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	• Back strain from lifting sample coolers and using sampling devices.	Biological Hazards: • PPE: Long pants, light colored clothing, ankle high boots, Tyvek and gloves as needed if walking through poison oak; whistle. • First Aid Kit: Insect repellent with the active ingredient DEET at no more than 30%; bug bite supplies. • Conduct self inspection for tics or insect bites or Poison oak. Physical Hazards: • Use a sun screen with a sun protection factor of at least 30. Apply 30-minutes prior to going outdoors, reapply two to three times if outside all day. Wear sun glasses (good idea to have ANSI Z87.1 approved safety glasses that can double as sun glasses). • Practice defensive driving techniques while driving to the SSFL. While at the SSFL obey all posted road signs. Wear seat belt. Set emergency brake as a matter of practice to ensure that the vehicle does not slip or roll. • Practice good lifting techniques by bending at the knees, maintaining the natural 'S' curve, holding objects close, tightening stomach muscles and not twisting when lifting. • Protect hands from scrapes and cuts by using work gloves when sampling or when moving debris.

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